Paramedical Training and Education

Prof. (Dr.) Gouri Pada Dutta.

Training and education of all kinds of health personnel are very important for health care delivery.

Since Independence, various national programmes have recommended and trained health workers with specific programme related functions. These have included the basic health workers for malaria; vaccinators for small pox programme; sprayers for malaria programme; assistants or family planning, trachoma and other programmes. Auxiliary Nurse Mid-wives (ANMs) were also inducted into the Mother and Child Health related programmes and family planning. In the early 1970s, the Kartar Singh Committee Report recommended that all the above uni-purpose male and female health workers belonging to different programmes should be retrained and re-oriented to become multi-purpose health workers, carrying out various functions in an integrated way community level relevant to all the programmes.

The concept of the male and female multi-purpose workers (MPWs) and male and female Health Supervisors (HS) was evolved in the 1970s and changes in the curriculum and training institutions took place. Meanwhile, in the voluntary sector, many projects such as Jamkhed and Miraj (Maharashtra); Deenabandhu, RUHSA, VHS – Adyar, and KSSS (Tamil Nadu); and many others all over the country demonstrated the potential and successful induction of community health workers especially women in community health action. The Jammu & Kashmir government started the Rehbar-e-sehat project inducting school teachers. Based on many of these experiments, the Shrivastava Report (1974) recommended the role and importance of community based health workers in health programmes for the people.

"The creation of large groups of part-time semi-professional workers selected from amongst the community itself, who would be close to the people, live with them provide preventive and promotive health service including family planning in addition to looking after common ailments........"

- Srivastava Report, 1974

This was subsequently formalised into the Jana Swasthya Rakshak programme of the Janata Government under Raj Narain and introduced into many states in the country. This was aptly supported by the ICMR and ICSSR reports in 1981. Due to political exigencies, professional neglect and lack of sustained policy support and initiative, a large number of the CHWs trained and available in the field became gradually non-functional.
Today, due to a legal requirement, a small number of them continued to draw monthly stipend but are non-functional in any other way. This excellent proposition failed became it was planned and implemented in a top-down manner. The programme came as a mechanical directive. The recipients remained in dark about the scope and limitations of the scheme.

Specific definitions of different categories of such health workers will be beneficial for operational purposes. They can be classified into three broad groups.

**Para-Professional**

These are voluntary workers from the community without having any structures organisation for them. These voluntary activists should receive training and some recognition from the community and the local self-government. Community Health Volunteers/Guides (CHV/Gs) and Traditional Birth Assistants (TBAs) were recruited with this idea. They became structured and trained health workers. Both these groups can be optimally used if it is under community control.

Many state governments such as Madhya Pradesh and Chatishgarh are initiating such schemes in various towns. Their efficacy and sustainability should be objectively reviewed and be duplicated, if possible, commensurating with regional situation under community control.

More recently, the Ministry of Health, GOI, along with WHO-SEARO and a network of community and women’s health resource centre have initiated a women’s health empowerment training with a purpose of initiating a process of women’s health empowerment through identifying local women leaders. All these experiments have met with different degrees of success.

Recent studies of the JSR Scheme in 1997 and 2001 have indicated that while such community based health workers have great potential, they need to be initiated with greater community preparation and involvement, with comprehensive problem oriented training and good supportive supervision linkages with the public health system. It is this community control and anchoring that is most necessary for heir optimal utilisation.

**Peri-Medical**

These workers are attached to the health delivery units providing indirect service. They are General Duty Assistants (GDAs), sweepers and Group C workers (clerks, accountants, storekeepers, ward-masters) and non-medical technical hands. While they have been neglected, these peri-medicals could play an important role in both preventive and curative services. They should be motivated and trained to optimise the function of the respective units where they are attached to.

**Para-Medical**
They are structurally constituted health personnel associated with preventive, promotive and treatment procedures. They are nurses of different categories, social welfare/extension officers, pharmacists, computers (workers), technicians of different categories e.g. laboratory X-ray technicians, ophthalmic assistants, physiotherapists etc. In addition, there are multi-purpose workers both male and female mentioned above and ANMs.

**Recruitment and Training**

**Para-Professional**

At present, recruitment and training for para-professionals are done in a perfunctory manner. They should be recruited and trained at gram sansad/panchayat level. The training will be to impart general health information and educated them to record events concerning health in a neighbourhood participatory manner (a continuous process) and initiate health consciousness/movement. Sub-centres, primary schools, gram panchayat and municipality premises can be used for training of para-professionals (structured and non-structured).

**Peri Medical**

For peri-medicals, training should be conducted in the health care units and the administrators of such units have to plan for their training.

**Para-Medical**

Paramedicals’ training and teaching of Multi-purpose Health Workers (MPHWs):

This very important group is not properly trained and utilised. For effective utilisation of health care, these MPHWs are the cornerstone of the pyramid. The existing modality has to be thoroughly revised.

(a) Their total administrative control should be vested with the panchayat samity i.e., recruitment should be done from the locality with the recommendation of Gram Sabha/Gram Panchayat.

(b) The course, curriculum and training modality should be designed keeping regional need and variation in mind. Understanding of health culture and assessment of home medicines and community health practices should be rationally included in the curriculum;

(c) The training centres should be situated at the Block PHC (BPHC) or Rural Hospitals giving more emphasis on practical work and community service;

(d) In the BPHC, CHC/Rural hospital, doctors and senior social workers in consultation with Panchayat Samiti will undertake the training programme;
(e) The raining should be continuing one.

Similar training for this lowest tier of structured para-medicals working in the municipalities, corporations or State organisation as health assistants and their supervisors should be undertaken in likewise manner.

In the rural areas, these MPHW’s are supervised and activated by (a) Supervisors, (b) Sanitary Inspectors (SIs)/Public Health Nurses (PHNs) and (c) by Block SIs and Block PHNs.

The functions and responsibilities of this group of para-medical persons require an in-depth assessment of their work and responsibilities. It appears from the present situation that so many tier of supervision is muddling the entire purpose and retarding the performance as per Parkinson’s Law, causing administrative inaction. If the control and supervision is vested in community through panchayat and Nagar Palikas, then these para-medicals may be trained and utilised for better purposes e.g., for monitoring, survey, resource identification and utilisation.

A present, in addition to these three tier supervisors, there are social workers/officers/extension educators and computer persons (one or two for every block units). These para-medicals are not utilised properly. Their job descriptions are complex and bureaucratic. These para-medicals, if trained, can work in the preventive and promotive health care with part of curative responsibility. Subsequently, their services may not be needed at all when Panchayat takes over the control.

These qualified para-medical staff should get the following knowledge during their training:

A. (i) Social orientation, (ii) method of interaction with the community, (iii) health culture, rational understanding about traditional medicine and home medicine; (iv) the broader intersectoral determinants of health.
B. They should be informed about the existing infrastructures and the working procedure of their superior and subordinate workers;
C. They should be informed about the state and national projects with critical analysis. They must have a good idea about the disease prevalence and the measures for its prevention and a least primary management of simple ailments for a specific duration and then should refer to the suitable units.

**TECHNICIANS**

The role of technicians in hospitals service cannot be over emphasised. Unfortunately, these groups of para-medical workers are not properly trained and their importance is under estimated. These para-medical personnel may be grouped as follows:

A. (I) Laboratory Technicians:
(a) Microbiology – with sub-groups like mycology, virology etc.
(b) Histo-pathology – sub-groups like cytology, cytogenetics, histo-
    chemistry, tissue-culture etc.
(c) Haematology – genetic study,
(d) Biochemistry.

(II) Radio-technicians (a) radiology, (b) radio-therapy, (c) ultra-sonography,
(III) Ophthalmic assistants – optometricians,
(IV) Dentistry and dental surgery technicians.

B. Special technical assistants – who will be able to operate.
   (i) Perfusion technology
   (ii) Heart lung machine
   (iii) Ventilators, respirators, fibrilators etc.
   (iv) Different types of sophisticated machines needed for cardiology,
        neurology/surgery.
   (v) Specialised investigative procedures like CT Scan, MRI etc.

For ordinary health care, these sophisticated training is not needed but there should be
provisions for training of such personnel, including motivation for socially needed
application of such investigation.

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Nursing Education and Training

Nurses remain the most important of all para-medical personnel. This constituent part of
health care delivery team requires special attention.

Over the years, India’s health structure has undergone fundamental changes. Similarly,
nursing service has metamorphosed from having no formal system of nursing education
to institution of more than 100 (GNM 739 + ANM 340) nursing schools and thirty (30)
colleges affiliated to the universities. Initially, nursing care was a part of medical
apprenticeship. Gradually, this was separated from the main system as an auxiliary
service for the benefit of the doctors but not of the recipients. Ms. Hewlett (1886) began
training ‘Dais’ who were conducting deliveries. They were self-appointed but accepted
by the community in a formal way. The Victoria Memorial Scholarship was established
and Madras began registering nurses and midwives. In 1918, the School for Lady Health
Visitors was started at Delhi. Before Bhore Committee Report (1946), general nursing
midwifery and community health nursing (for the cadre of L.H.V.) had three separate
courses.

Today, there are several levels of nursing education India.

1. Schools for ANM and MPHW (female). Training period is 1 ½ years.
2. A three and half year’s diploma course in General Nursing (GNM) and a four-year B.Sc. (Nursing). The requisite qualification is higher secondary completion certificate.

3. There is also a two year post basic (diploma/certificate) course. It is also available for clinical specialities, administration, education and B.Sc. nursing.

4. Post-graduate programmes include M.Sc. and M.Phil in nursing and Doctorate/Post-doctoral programmes can be taken in allied subjects in several universities. There are five colleges, which offer M.Sc. in nursing.

The status of nursing services in India has been depicted under Table -1.

Table – 1. THE POSITION OF NURSING EDUCATION IN INDIA (2001)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Type of Course</th>
<th>No. of Institutes</th>
<th>Duration of Course</th>
<th>Admission Requirements</th>
<th>Annual Admission (Number)</th>
<th>Annual Turnover (approx.)</th>
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<td></td>
<td>a) General Nursing &amp; Midwifery</td>
<td>739</td>
<td>3 ½ yrs</td>
<td>12 yrs of schooling</td>
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<tr>
<td></td>
<td>b) Auxiliary Nurse/Midwifery</td>
<td>340</td>
<td>1 ½ yrs</td>
<td>10 yrs. of schooling</td>
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<td>4264</td>
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<td></td>
<td>a) B.Sc. (Nursing)</td>
<td>15</td>
<td>4 yrs</td>
<td>10 + 2 yrs. of schooling with science subjects</td>
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<td>219</td>
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<tr>
<td></td>
<td>b) Post Basic</td>
<td>10</td>
<td>2 yrs</td>
<td>Registered Nurse and Midwife + 2 years</td>
<td>230</td>
<td>123</td>
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<td></td>
<td>c) Masters in Nursing</td>
<td>4</td>
<td>2 yrs</td>
<td>B.Sc. Nursing + 3 yrs experience</td>
<td>65</td>
<td>32</td>
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<td>3</td>
<td>Diploma</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>a) Psychiatric Nursing</td>
<td>1</td>
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<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Nursing Admin. &amp; Nursing Edu.</td>
<td>2</td>
<td>10 months</td>
<td>Registered Nurse and Midwife + 2 years</td>
<td>167</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Public Health Nursing</td>
<td>5</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Despite the number of schools and training programmes, the results are far from satisfactory. The total number of nurses (all categories) is 11,95,438.

**Some Challenges**

- In 1963, Indian Council of Nursing set out to revise the GNM course with the assistance of WHO in recognition of the changing role of nurses and ANM. In 1982, the syllabus was revised again with the changed need of the society. All these changes were done to develop nursing service as a parallel one but not with a holistic attitude. This parallelism has created more complexity in the health care than resolving the problem and optimising the benefit to the service as a whole. With all these opportunities to elevate their position (although very limited), the nurses are kept subservient to the doctors. The entire course and training becomes useless for them in the practical field, where their main activities remain clerical and minimum patient care.

This problem has to be dealt with much care and pragmatism.

It appears that:

(ii) The theoretical training is too academic. The nurses seldom get opportunity to utilise their knowledge, as they have to follow the direction of the doctor. They do not have any right to contradict and advise the doctor even if they find the direction is erroneous.

(iii) Nurses are not allowed to perform medical examination except examination via naturalis, in obstetric cases. They are not allowed to undertake any obstetric operation/manipulation, including simple procedure like IV transfusion, episiotomy and its repair.

(iv) In cases of abortion and post-partum haemorrhage, they are only allowed to give intra-muscular oxytocin injection.

(v) They are not allowed to drain an abscess.

- As this is the situation, either their training period be shortened and rationalised or they should be allowed to practise these simple management/treatment procedures.
- From the GNM, there should be special training for operation theatre and labour-room duties and these trained persons should not be transferable to general duties.
- Special training of nursing staff to work in specialities like paediatrics especially from neo-natal service and for super specialities of cardio-thoracic surgery, neuro-surgery, plastic surgery etc. should be introduced to institute better performance of these specialities.
• The nurse-patient ratio at present is 1:5, which appears to be inadequate. To increase the number of nurses, introduction of short courses and day scholarship should be considered. The theoretical courses should be reduced giving more stress on practical management of the patients and their care.

• It is also suggested that the GNMs and other categories of nurses will be allowed to perform curative services prescribed in a structured manual e.g. application of low forceps, episiotomy and its repair, draining of abscess, repair of injuries, administration of transfusion, lumber puncture, draining of peritoneal fluid etc.

• The old cadres of public health nurses and lady health visitors have gradually disappeared. Serious consideration much be given to reformulate training for such community based nursing professionals, who would need to build capacities of ANMs and community health workers as well as supportively supervise them.

Working Conditions [repositioned]

• Working conditions for the nurses are usually poor. There is a general sense of indiscipline in hospitals, which has sipped among the nurses also. As a result, many nurses are.

• Refusing to perform night duty on flimsy ground. If forced to do, they are creating pressure from higher authorities, political leaders etc.

• Refusing to do ward duty and demanding duty in OPD, OT and PP Unit, where duty hours are maximum 4 hours. For this, there is tremendous pressure from various concerns.

• Refusing rotation among heavy and light wards. Nurses with support from various backgrounds press for light duties.

Private Sector [repositioned]

It was also mentioned that the standard of nursing in the private sector is poor. Some nursing homes even conduct short, sub-standard "nursing" courses and appoint virtually untrained persons on low salaries, as nurses. This issue has no been studied adequately. Nursing councils, local bodies and state health authorities need to examine the functioning of such institutions in the private sector, in order to protect the interests of patients.

Training Institutions

Nursing colleges

In recent years, there has been a phenomenal increase in the number of nursing colleges and nurses’ training programmes. This mushrooming has been made possible by the
commercial and market economic factors rather than rational and evidence based human power development. It has led to a major decline in standards with many colleges and nursing schools not having the minimum requirements prescribed by the Nursing Council in terms of college facilities, equipment and teaching staff. Many have started in school buildings and other such locations not at all suitable for nursing education. Surprisingly, many have also been started without proper linkages to hospitals. In nursing education, adequate exposure to hospital and patient care is a basic and essential requirement. It seems that even this being compromised nowadays. Such lowering of standard has led to very poor quality of nurses being produced in recent years from these new colleges. The Nursing Council and the Health Ministries like the Medical Council mentioned earlier should not allow clandestine financial transactions and political interference to determine the growth of nursing education in the country. A moratorium on further expansion of nursing colleges is required till these commercial distortions and fall in standards is adequately addressed. In the absence of that, short term gains of larger number of nursing professionals will be offset by the long term crisis in health care quality.

The Indian Nursing council and the State Nursing Councils should be given greater power, to enable them to regulate the standard of education and training of nursing courses. The Ministry of Health and Family Welfare and the State Governments should consider providing these bodies with greater powers and finance, so that government and private sector nursing services and personnel are properly regulated. (…………..repositioned).

**ANM Training Schools**

The standard in ANM training schools needs to be improved. Inducting qualified and trained teachers, using appropriate teaching aids, and constructing proper buildings can do this. There is an urgent need to review the essential physical, educational and fiscal requirements of ANM schools and ensure that these are provided. Presently, facilities like space, equipment, library, funds etc., are inadequate. In some institutions, ANMs have qualified without conducting a single delivery case. Studies show that a majority of the deliveries in rural areas are conducted by trained or untrained dais; reportedly very few deliveries are conducted by ANMs. Field training facilities should be enhanced substantially, to enable trainee ANMs to perform a sufficient number of normal deliveries and obtain training in the specific functions that they are expected to perform at a sub-centre. Their training should be community-based. They should be provided hand-in training so that they can conduct home delivery adopting appropriate technology (traditional method of delivery is scientific and beneficial to the mother).

There is shortage of teachers in ANM training schools. Usually, staff nurses are posted as faculty members at the training centres, without having any teaching experience. Often doctors associated with local hospitals are requested to take classes on an ad-hoc
basis. This causes more harm than good. There is hardly any reorientation courses to update the knowledge of faculty members. What is true of ANM schools is also true of other nursing institutions. There is a pressing need to review the academic content of courses, in order to strengthen Nursing Education.

**Nursing Professional – the way ahead**

The main reasons for sub-standard patient and community care are: sub-standard training, especially in the staff nurse-midwife, and ANM courses; the lack of a proper system of training; and the absence of regular reorientation courses. Varied courses need to be developed so that nurses can be independently entrusted with patient care (especially of chronic cases), and some areas of community care. This will improve the quality of patient and community health care and will be a step towards achieving the goal of Health for All. Indeed, the nursing profession can play a major role in this respect. The Committee recommends the following recommendations to improve the nursing and ANM education in the country:

**Recommendations**

**Nursing**

1. The Indian Nursing Council and State Nursing Councils need to be revitalised, empowered and liberally financed, so that they can regulate the standard of education and training of courses in the country. The syllabus of all courses (for instance, staff nurse-midwife, B.Sc. (Nursing) should be standardised. Minimum requirements for conducting training should be laid down and enforced, as has been done by the Medical Council of India.

2. The Chairperson/President of the Nursing Council of India and State Nursing councils should only be from the nursing profession. The system of the Director General of Health Services and State Director of Public Health/Health Services serving as Chairperson/President should be discontinued.

3. Continued education and reorientation training courses should be introduced for all categories of nursing personnel. His needs to be taken up in the private sector also, through the TNAI and its branches.

4. Proper working conditions for nursing personnel should be provided. Service conditions, including promotional avenues of nursing staff, should be improved.

5. Workload of every category of staff, sanctioning of bed, doctor-nurse-bed ratio should be prepared and maintained.

6. Assessment of performance of the staff at every stage should be made.
7. Conceptual consideration of nursing service has to be rationalised for optimisation of different categories of nurses.

8. Their education and practical training must be need-based, specific job orientated and pragmatic.

9. Training system of every category of nursing staff be made more scientific and effective.

**ANM Training**

1. A system of regular evaluation of educational courses for ANMs and staff nurse-midwives needs to be introduced in all states and at the central level. All institutions should be periodically inspected to ensure that prescribed teaching facilities are available.

2. Sub-centre buildings should be built within the boundaries of the village, for the convenience of the people and the safety of ANMs.

3. As far as possible, ANMs should be posted in their home villages. This will solve the problem of safety and timely attendance.

4. The present workload of ANMs needs to be rationalised and reduced, taking into consideration: the population to be covered, distance to be travelled, type of terrain to be covered and services to be rendered. In difficult and vulnerable areas (hilly, desert and coastal areas), the population to be covered by one ANM should be specifically determined, so as to ensure that the ANM is able to effectively discharge her functions and duties. States and local panchayats should decide this, rather than the Central government.

5. M.P.H.W. scheme should be continued and revitalised. MPHW training should be re-oriented and re-modelled. The training must be need-based and commensurate with the health culture and rational health practice of the community, especially for the tribal people. For tribal areas, MPHW should be re-oriented and from the tribal people, they should be posted in the tribal areas. The qualification will be up to class VIII for the tribal people re-oriented especially for the tribal areas. This has to be introduced immediately and may be for only a limited period.

6. Involvement of Panchayat/Municipal Bodies in looking after the smooth and effective running of the Health care service should be ensured.

7. Village health committees should be established in each village and proper liason established with the ANMs, so that essential programmes are planned with certain objectives and aims (rather than target-oriented programmes from the top).

**In Conclusion :**

All these health human power development recommendations and changes can not take place unless there is a strong demand for radical change from the community
level and on behalf of the community by civil society. The country has needed a strong countervailing health-orientated movement by health and development groups, consumers and people’s organisations, that will enhance the role of the community, patients, consumers and the people in the entire debate on reform in the health and medical sector. Change has been directed and controlled for too long by professional needs, rather than people’s health needs. [repositioned]

- For decades, networks such as voluntary Health Association of India, the Catholic Health Association of India, Christian Medical Association of India, medico friend circle, all India Drug Action Network and Asian community Health Action Network have tried to play this role by bringing together the energies and perspectives of civil society in the country since 1970s. The health movement organised by Jana Sastha Committees and Jana Sastha Chetana Prachar Samannay Committee in West Bengal is trying to initiate health movement encompassing mass organisations like Krishak Samities, Trade Unions, Women’s Organisations (Mahila Samities), Organisations of Youth and Students along with various voluntary organisations like Paschim Banga Bighyan Mancha, Indian Medical Association (IMA) and Association of Service Doctors (of all disciplines) in a single platform. This Jana Sastha Chetana Prachar Samannay Samity instituted the national health Assembly in Calcutta in 1999, where people from all walks of life participated.

- The setting up of the Independent Health Commission in India by VHAI and its first report by its members and associates in 1997 was an another step in this direction to provide a counterveiling independent pressure group on health sector reform in the country.

- Finally, in December 2000, the evolution of the Jana Swasthya Abhiyan (People’s Health Movement – India) linked to the Global People’s Health Movement that emerged from the first national Health Assembly (Kolkata, December 2000) and first global People’s Health Assembly (Gonoshasthya Kendra, Savar, Bangladesh, December 2000) has created new possibilities for strengthening the movement towards health for all in the country. Bringing together 18 national networks including VHAI, the Jana Swasthya abhiyan is gradually evolving into such a movement with an increasing presence in many states.

The Indian People’s health Charter which was evolved in Kolkata as the manifesto of this new movement included the following major demands in the context of health and medical education:

- “A comprehensive need based human power plan for the health sector be formulated that addresses the requirement for creation of a much larger pool of paramedical functionaries and basic doctors, in place of the present trend towards over-production of personnel trained in super-specialities.

- Major portions of undergraduate medical education, nursing as well as other paramedical training be imparted in district level medical care
institutions, as a necessary complement to training provided in medical/nursing colleges and other training institutions.

- No more new medical colleges to be opened in the private sector.
- Steps be taken forthwith to close down private medical colleges charging fees higher than state colleges or taking any form of donations, and to eliminate illegal private tuition by teachers in medical colleges.
- At least an year of compulsory rural posting for undergraduate (medical, nursing and paramedical) education be made mandatory, without which license to practice not be issued.
- Similarly, three years of rural posting after post-graduation be made compulsory. (Source: People’s Charter for Health, reprinted by VHAI, 2004)

(Source: People’s Charter for Health, reprinted by VHAI, 2004)

While these new commissions and movements are beginning to be taken seriously by the government, which is a very positive development, much more needs to be done to enhance the community – health system dialogue by the planners in the country.